

REMARKS

STATUS OF CLAIMS

In response to the Office Action dated January 24, 2008, claims 1, 4, 5, 8, 9, 22, 23 and 25 have been amended. Claims 1, 4-10, 14, 22-26 and 30 are now active in this application. No new matter has been added. Claims 11-13, 15-21, 27-29, 31 and 32 are withdrawn from consideration as directed to non-elected species.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 103

I. Claims 1, 5-10, 14, 22-26 and 30 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons (USPN 6,734,911) in view of Anderson (USPN 7,106,376).

To expedite prosecution, independent claim 1 has been amended to recite, *inter alia*:

a range setting unit for restricting a searching range in the depth direction for searching *for* said main subject from the plurality of objects using the input image data;

a partial image extracting unit for extracting, *as a partial image, at least a portion of one of said plurality of objects* from said image data based on depth distribution information indicating a distance to each of said plurality of objects included in said image data, a depth direction of said partial image being restricted to said searching range set by said range setting unit; and

a main subject detecting unit for *receiving main subject information and detecting whether* said partial image *is said main subject based on said* main subject information, wherein

in searching for said main subject from the plurality of objects, said partial image extracting unit extracts first, as the partial image, at least a portion of said one of said plurality of objects that is closest in distance in the depth direction...

In addition, independent claim 22 has been amended to recite, *inter alia*:

inputting image data of a plurality of objects, the image data is generated by capturing one of the plurality of objects viewed from a plurality of different perspectives;

setting a searching range, which defines a depth length for searching for a main subject in said image data;

extracting, *as a partial image, at least a portion of one of said plurality of objects* from said image data based on depth distribution information indicating a distance to each of said plurality of objects included in said image data, a depth direction of said partial image being restricted to said searching range, the depth distribution information being calculated from said image data;

receiving a predetermined main subject information relating to said main subject; *and*

detecting whether said partial image is said main subject based on said predetermined main subject information, wherein

in searching for said main subject in said image data, extracting first, as the partial image, at least a portion of said one of said plurality of objects that is closest in distance in the depth direction.

Lyons is directed to a tracking system that keeps tracking an OBT (object being tracked) once the OBT has been found. Step 82 of Fig. 8A is directed to finding OBT in a composite image, Step 91 of Fig. 8B is directed to searching for OBT in peripheral region only. However, no specifics for finding the OBT are described in Lyons. More specifically, Lyons does not disclose or suggest that for image data of a plurality of objects that also includes a main subject, extracting, *as a partial image, at least a portion of one of said plurality of objects* from the image data based on depth distribution information indicating a distance to each of said plurality of objects included in said image data. Since Lyons does not disclose how an OBT is found, there is also no disclosure of receiving a predetermined main subject information relating to the main subject and *detecting whether the partial image is the main subject* based on said predetermined main subject information.

Lyons also does not disclose a range setting unit for restricting a searching range *in the depth direction for searching the main subject from the plurality of objects* and that a depth direction of the partial image is restricted to the searching range. In this regard, while Lyons

uses a wide-angle field of view and a narrow-angle field of view to form a composite image, these cannot reasonably be interpreted as restricting a searching range in the depth direction. In Fig. 2A of Lyons, the depth direction is the direction perpendicular to the image. As further disclosed in Fig. 1C of Lyons, the narrow field of view portion of the lens focuses light onto central region 26 of the image sensor 43, while the wide-angle field of view portion of the lens focuses light onto annular or peripheral region 27 of the image sensor 43. In Fig. 2A of Lyons, when image sensor 43 has the size corresponding to the dotted lines 28, portion 29 would correspond to focused light from the narrow field of view portion of the lens while the remainder would correspond to focused light from the wide-angle field of view portion of the lens. As can be seen, depth (the direction perpendicular to the image) is not restricted.

Finally, Lyons does not disclose that in searching for the main subject from the plurality of objects, the partial image extracting unit extracts first, as the partial image, at least a portion of the one of the plurality of objects that is closest in distance in the depth direction.

The Examiner relies upon Anderson as teaching an image processing apparatus including a range setting unit and an image extracting unit for extracting the main subject from among a plurality of object from within the set searching range. However, even if Anderson does teach this, focused points (the distances at which each object 502, 504, 506 and 508 of Figs. 3A, 3B and 4B of Anderson are best focused) are found by focusing on objects that are farthest from the camera and then moving to objects close to the camera (see col. 7, lines 13-19 and col. 8, lines 32-36). Such searching is *opposite* to that recited in amended independent claims 1 and 22.

Therefore, amended independent claims 1 and 22 are patentable over Lyons and Anderson, as are claims 5-10, 14, 23-26 and 30.

II. Claim 4 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons in view of Anderson, and in further view of Hanna et al. (USPN 6,714,665).

Hanna et al. does not remedy the above-noted deficiency of Lyons and Anderson with respect to amended independent claim 1 and claim 4 depends directly from amended claim 1. Therefore, claim 4 is patentable over Lyons, Anderson and Hanna et al.

III. In view of the above, the allowance of claims 1, 4-10, 14, 22-26 and 30, as amended, is respectfully solicited.

REJOINDER

If claims 1, 4-10, 14, 22-26 and 30 are allowed, claims 11-13, 15-21, 27-29 will depend from allowed claims. In such case, withdrawal of the restriction requirement as to claims 11-13, 15-21 and 27-29 [non-elected species], as well as their allowance are respectfully solicited (see MPEP § 821.04 Rejoinder).

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Edward J. Wise Reg. No. 34,523 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 09/712,925
Reply to Office Action of January 24, 2008

Docket No.: 3562-0108PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: May 20, 2008

Respectfully submitted,

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